Author’s response to reviews

Title: Caries Prevalence and Dental Health of 8-12 Year-Old Children in Damascus City in Syria during the Syrian Crisis; a Cross-Sectional Epidemiological Oral Health Survey

Authors:

Muhammed Al-Huda BALLOUK (dr.muhammed.alhuda@gmail.com)

Mayssoon DASHASH (mdashash@yahoo.com)

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Author’s response to reviews:

Dear Professor Dr. Marlise Klein;

Have a nice day professor …

This is concerning: OHEA-D-18-00438, with the title of “Caries Prevalence and Dental Health of 8-12 Year-Old Children in Damascus City in Syria during the Syrian Crisis; a Cross-Sectional Epidemiological Oral Health Survey”. By: Muhammed Al-Huda BALLOUK, & Mayssoon DASHASH.

Thanks a lot for your kind email which I received with so much pleasure. I fully understand that the questions, notes, and thoughts raised by the reviewers are meant to strengthen the paper before having it published. I, therefore, have to be thankful to you and them for your precious time and efforts. I am delighted to hear that my manuscript was positively viewed and that it is likely to be published at the BMC Oral Health. I will try to answer your rightful questions and concerns in this email and surely point by point, reviewer by reviewer. I also hope that you have a look at the reviewers’ comments and my reply to each of them so I can make use of your own personal advice which I highly perceive and value.

The reviewers are listed in the same order they were shown at the editorial manager BMC Oral Health website and titled the same way their names appeared.
Isabel Adler (Reviewer 1)

Thanks a lot for your opinion and advice which we highly appreciate. Here is the response to your raised points:

1. As to the “Materials and Methods”, we definitely had clear inclusion and exclusion criteria and I will mention them for you in here but first I would like to explain why we chose not to include them in our text. It is simply that the study was an epidemiological study aiming to reach prevalence estimates in the target society and it is clear that mostly all prevalence studies try include as much of the study objects as possible and not exclude any objects unless there is a clear necessity for that and this is for sure to get to results that are truly representative of the society under study. Again, yes I totally agree that it can be a good idea to clarify this issue and add it straight and direct to the text.

Inclusion Criteria:

Children aged 8 to 12 years old and residing in Damascus city in the time of the study.

Having no personal reasons that prevent the children from participating (whether for the children themselves or their carers).

Exclusion Criteria:

Children having any active infectious diseases or any medical conditions that suggest special extra precautions for the children’s own safety and health as well as the examiner.

(Changes have already been made according to your kind advice and the inclusion and exclusion criteria have been added to the revised manuscript and can be found at the bottom of the 4th page of the uploaded file in the “Methods” section right after the “The Study Sample and Sampling Method” subheading).

2. As to the Results and the Tables, I think you are correct and that it is better to have tables’ descriptions in here rather than later on and indeed this should be moved up. (Changes have already been made according to your kind advice and the tables’ descriptions have been moved up in the revised manuscript and can be found at the end of the Results section right before the Discussion heading, this is on the 6th page of the uploaded file).
3. As to comparing our results in the Discussion, well in here it gets a little bit tricky as we have no clear straight-forward data for how the situation was before the crisis. Therefore, we cannot compare our results to earlier statistics. As for comparing our results with results of other studies, Table 1 handles the job well I guess and if we try to make comparisons in a form otherwise than that table I think it is going to take us 10 extra pages so we thought that Table 1 will suffice. If you have anything in mind that you think that can serve better it will be my pleasure.

Thanks a lot for all your advice, efforts, and time which I highly appreciate.

Jose Leopoldo Ferreira Antunes, PhD (Reviewer 2)

Thanks a lot for your opinion and advice which we highly appreciate. Here is the response to your raised points:

1. The schools were selected randomly from the lists of schools provided by the Ministry of Education. Still, we took in account the numbers of children required for each sector so we sometimes needed to examine another school which we also selected randomly.

(Changes have already been made according to your kind advice and this have been added to the revised manuscript and can be found at the bottom of the 4th page of the uploaded file in the “Methods” section right before the “Inclusion Criteria” subheading).

2. It was stated in the “Methods” section under the subheading “The Examination Procedure” that all the practical field part all the examinations were done by a single examiner (Muhammed Al-Huda BALLOUK = me). So as for the number of dentists that participated in this whole research, they are 2 (my professor whose part was supervising the research and me). No test-retest was done and I totally agree that it could have been better had I been able to repeat the tests for a part of the study sample but still there is enough reasoning for not taking that action. Repeating the examinations is not favorable at all in children of such an age for they will neither like it nor accept it nor be a good practice to go examining their oral cavity again for so many reasons like making them develop some sort of negativity towards the dentist. Another important
issue is that not all schools’ administrations showed complete cooperation. All in all, I agree to your point totally but for the above-mentioned reasoning I guess it wasn’t crucial or of so much importance especially when taking in consideration the big sample size that helps in reducing such errors. Still, this will be added to the limitation of the study and will be addressed in the paper. (Changes have already been made according to your kind advice and this have been added to the revised manuscript and can be found on the 10th page of the uploaded file in the “Limitations” section under “Logical Limitations”).

3. The children were examined at their schools.

(Changes have already been made according to your kind advice and this have been added to the revised manuscript and can be found in the middle of the 5th page of the uploaded file line 16 in the “Methods” section right before the “Statistical Processing” subheading).

4. As to the age group selection justification, I know that indeed. The WHO advises that the screening age groups for oral health surveys are 5, 12, 15 etc. with the 12-year age group as the international oral health comparison indicator. You are correct in that 100%. But let me tell you why we went for the 8 to 12 age group and that these earlier WHO advised age groups are a wrong choice in this case. The WHO haven’t taken into account such circumstances like our crisis when developing and settling on these age groups. I will explain. The crisis started in Syria in 2011 while the study was planned and carried out in 2016. Had we decided to screen only one year age group (like 12 or 15) then we would have been likely to be biased, how? Well, ever since the crisis start everything differed less food less health-care facilities and you can keep on counting. If we are to screen the children who were 12 in 2016 and who happen to be 7 in 2011 then we are being biased for although 12 years olds are representaitve generally speaking but in our situation our 12 years olds are not, their oral health cannot be representative for they were 7 by 2011 and this means they got better circumstances than other younger population objects that were born later and for 7 years. They got better food, health-care, safety, etc etc … And as the aim for such studies is to assess facts unbiased, then we cannot in our situation take the 12 years age group as an indicator that is representative of the children’s oral health in one society the same way the WHO normally suggests in otherwise situations. Therefore, we tried to widen the target age group ages but still have coherence in the sample. So, we settled on the 8 to 12 which also can be considered as the mixed dentition age group as some researchers suggest. Also, taking in consideration that the optimum for the DMFTs & dmft indices is zero regardless of age makes it clearer that there won’t be a problem when grouping different ages together.
5. Well in here they call it “internal displacement” since they are not going out of the country but rather having to flee from a city to another or from one place to another, so instead of calling them migrants or immigrants they use the term “internally displaced”. Now, in reply to your question yes absolutely all sectors were affected and deeply for it is not only the migratory influx and the waves of people moving to the city but also the financial status the general public health burden even the doctor/patient ratio all got affected and in all sectors and it is clear for me that some sectors got more affected than others but all were affected. However, which sectors got most affected is something that is beyond my reach of information for it requires was so very much big teams and organisations efforts to study that and settle on certain facts. Still, it is worth mentioning that when talking about these sectors there are no borders or barriers between them. Again, differences in socioeconomic status and health care facilities exist I can say but it is still beyond my research to discuss that as it is a cross sectional study concerned basically with caries and dental health numbers.

6. Good question indeed. Still, I mentioned it earlier in the text that water fluoridation has been absent since the start of the crisis. The main water supply for the city became a conflict area and at one point even water was cut from the whole city for about a month or so and the situation was so tragic. Whether water lines are the same for the whole city or not, well yes the main pipes and most of the water comes from the same resource but after the conflict and due to the inability to control the main water resource always, so sometimes many other small springs were used to support the water mainstream. I think this is though important information but still sort of too complicated for the paper still it is my duty to answer your righteous and correct question. Still, on page 7 line 2 you will find the phrase “having no water fluoridation,” and it is already mentioned in the manuscript.

7. Table 1 shows some of the literature related or like this study to allow some comparisons and to serve the reader in giving them further insight into other like research. I got a review as well from another reviewers to compare our results to other results from different places and in here I cannot find a way better than briefing the results in such a table. You are right it is such a comprehensive review but it is meant to enrich the paper with literature information that can help the reader summarise all of these papers in one page. As for the criteria in selecting the studies, those are studies reporting the dmfts or DMFTs in any society and are published after 2006 and reachable through PubMed (in other words published in journals indexed by Medline). Why 2006? Well for this present study was carried out in 2016 and we aimed at providing the data from studies like our study in the last 10 years or the last decade for this is the literature that matters in such a field. Surely, I should add these details in the revised manuscript. (Changes have already been made according to your kind advice and this have been added to the revised
manuscript and can be found on the 7th page of the uploaded file line 18 in the “Discussion” section under the subheading “Geo-Demographical Comparisons”).

Thanks a lot for all your advice, efforts, and time which I highly appreciate.

Lynn Al-Zwaylif (Reviewer 3)

Thanks a lot for your opinion and advice which we highly appreciate. Here is the response to your raised points:

The study was done by a single examiner. Yet, indeed no test-retest was done and I totally agree that it could have been better had I been able to repeat the tests for a part of the study sample but still there is enough reasoning for not taking that action. Repeating the examinations is not favorable at all in children of such an age for they will neither like it nor accept it nor be a good practice to go examining their oral cavity again for so many reasons like making them develop some sort of negativity towards the dentist. Another important issue is that not all schools’ administrations showed complete cooperation. All in all, I agree to your point totally but for the above-mentioned reasoning I guess it wasn’t crucial or of so much importance especially when taking in consideration the big sample size that helps in reducing such errors. Still, this will be added to the limitation of the study and will be addressed in the paper. (Changes have already been made according to your kind advice and this have been added to the revised manuscript and can be found on the 10th page of the uploaded file in the “Limitations” section under “Logical Limitations”). Also, a section under the title limitations was added as to your advice and I hope it covers the issues you addressed.

As for the socioeconomic characteristics, I know it would have served the paper better adding such information but as you know to reach an accurate evaluation or even a close enough evaluation for the Socioeconomic Status (SES) you need to have a complete questionnaire form to be sent to the parents and filled with complete details and this is if you know the situation well in here sort of next to impossible even in imaginations. Why? Well the crisis circumstances made everyone in here sort of more inclined not to declare or tell anything about their income, possessions, or even any slighter personal information. This is surely not to mention the hard administrative work that will be required to arrange authentications for such data collection from
the public. Now the other way (the less trusted way) for evaluating the SES is to try guess it from
the children’s clothing, supposed parents’ work declared by the children, etc etc .. and this is not
a reliable fact nor even a rough estimate.

Thanks a lot for all your advice, efforts, and time which I highly appreciate.

Peter Bottenberg, PhD (Reviewer 4)

Thanks a lot for your opinion and advice which we highly appreciate. Here is the response to
your raised points:

Caries was recorded as the enamel level and surely even before cavitation occurs and this is as to
the WHO standards for it takes in consideration even the slightest caries degrees and hence these
guidelines were followed.

As for the intra-examiner-reliability of the recording … The study was done by a single
examiner. Yet, indeed no test-retest was done and I yes I totally agree that it could have been
better had I been able to repeat the tests for a part of the study sample but still there is enough
reasoning for not taking that action. Repeating the examinations is not favorable at all in children
of such an age for they will neither like it nor accept it nor be a good practice to go examining
their oral cavity again for so many reasons like making them develop some sort of negativity
towards the dentist. Another important issue is that not all schools’ administrations showed
complete cooperation. All in all, I agree to your point totally but for the above-mentioned
reasoning I guess it wasn’t crucial or of so much importance especially when taking in
consideration the big sample size that helps in reducing such errors. Still, this will be added to
the limitation of the study and will be addressed in the paper. (Changes have already been made
according to your kind advice and this have been added to the revised manuscript and can be
found on the 10th page of the uploaded file in the “Limitations” section under “Logical
Limitations”).
“You recorded DMF-s/dmf-s: which surface on what tooth was more affected (expand information given on page 8)? Did this differ according to sectors (as DMF t and s seem to be quite different per sector)?” I quote you in here. Well, I would like to draw your attention sir that the DMFTs and the dmfts indices are the ones that are usually used on large size epidemiological surveys as you know and these are the ones used in our study too and NOT the DMFSs or the dmfss and you can double check the original manuscript to find out there has been no mentioning at all for the DMFSs index in the entire manuscript. The use of the DMFSs as am sure you know would have proven inadequate and unnecessary especially with a large sample size of 1500 children and under such circumstances not to mention that no preventive measure was applied earlier to study its effectiveness.

Many other indices were recorded and published as it was a full oral health survey. Still, we cannot double publish the other results as you know for it is counter scientific research publishing laws and good practise. Still, no one publication can cover all the data as only the dental aspect of the research made us reach the limits of the words counts despite of trying to make it as brief as possible.

Data were normally distributed indeed and also there is another simple and clear reason behind using means and not medians. It is a caries prevalence and dental health survey sir and the overall health is the average indices values (even if any too high or too low values existed had there been any) and still this is what the WHO guidance suggests.

Unfortunately, no clear accurate straight-forward data about the circumstances before the crisis are available and the comparison of before and after is not applicable.

Thanks a lot for all your advice, efforts, and time which I highly appreciate.

This brings us to the end of the response letter with all points raised by all reviewers having been answered one by one and with the changes required having been edited. We hope that our revised manuscript will meet your preference and get published in your kind journal the BMC Oral Health.

Super thankful to you indeed.
Eager to hearing from you real soon.

Best Regards

Yours Sincerely

Dr. Muhammed Al-Huda BALLOUK